

**Patent Claims**

1. System for obstacle warning for railborne vehicles, in particular for high-speed trains, with at least one sensor (S1, S2) provided on the railborne vehicle, thereby characterized, that the sensor (S1, S2) is oriented transverse to the direction of travel of the railborne vehicle (Fz), so that potential obstacles within the structural clearance in the path of travel of a vehicle (Fz) of the adjacent rail can be recognized.
2. System according to Claim 1, thereby characterized, that the sensor (S1, S2) is oriented at an angle of essentially 90° to the direction of travel of the railborne vehicle (Fz).
3. System according to Claim 1 or 2, thereby characterized, that the sensor (S1, S2) is an optical sensor, in particular an IR-sensor and/or a radar sensor.
4. System according to one of the preceding Claims, thereby characterized, that multiple sensor types are provided, of which the sensor data form the basis for evaluation.
5. System according to one of the preceding Claims, characterized by at least two sensors (S1, S2), which are provided spaced apart from each other with respect to the direction of travel, and a correlation device (KO), in which a correlation of the sensor data of the two correlation (S1, S2) occurs.

6. System according to one of the preceding Claims, thereby characterized, that the railborne vehicle (Fz) operates according to the principle of rails/wheels or is magnetically levitated.
7. System according to one of the preceding Claims, thereby characterized, that the sensors (S1, S2) are directed in both transverse directions of the railborne vehicle (Fz).
8. Use of the system according to one of the preceding Claims for evaluating the quality of the railway, for automatic recognition of land based anomalies along a railway, for inferences regarding the travel dynamics of the vehicle and for locationally fixing the vehicle.